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| APPLICATION NO.   | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/595,945  | 05/22/2006  | Ralf Mayer           | 032301.458          | 9528             |
| 441 7590 04/12/2010<br>SMITH, GAMBRELL & RUSSELL<br>1130 CONNECTICUT AVENUE, N.W., SUITE 1130<br>WASHINGTON, DC 20036 |             |                      |                     |                  |
| EXAMINER  |             |                      |                     |                  |
| STALDER, MELISSA A  |             |                      |                     |                  |
| ART UNIT  |             | PAPER NUMBER         |                     |                  |
| 1793  |             |                      |                     |                  |
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/595,945

**Applicant(s)**

MAYER, RALF

**Examiner**

MELISSA STALDER

**Art Unit**

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/22)  
Paper No(s)/Mail Date \_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 8 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The language of claim 8 repeats the language already included in step (b). This claim is not further limiting as written.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

Claims 1 and 3 are rejected under 35 U.S.C. 102(a) as being anticipated by Haas (WO 03/049849). Haas teaches the production of catalyst where acidic metal salt solutions are precipitated by means of a basic solution. A suspension is formed and the catalysts are shaped through freezing and then freeze-drying followed by calcination (abstract; pg. 3, lines 1-11) (the freeze drying process involves sublimation of a liquid with the use of a vacuum pump). Haas does not teach the appearance of precipitates and instead teaches that the material in

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suspension that is then frozen can be shaped and identified (pg. 6, line 18-pg. 7, line 10; claims; pg. 2, line 24-pg. 3, line 11).

Regarding claim 3, Haas teaches examining the shaped bodies for their catalytic applications (pg. 24, lines 7-8).

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 3, 7, 9, and 10 are rejected under 35 U.S.C. 102(b) as being anticipated by Kirchnerova, Jitka, Synthesis and characterization of perovskite catalysts, Solid State Ionics 12 (1999) 307-317). Kirchnerova teaches the production of a perovskite catalyst where a slurry of lanthanum hydroxide and metal nitride is mixed with a hydroxide slurry to form a precipitate and then a suspension. The suspension is spray-frozen, freeze-dried and calcined (the freeze drying process involves sublimation of a liquid with the use of a vacuum pump). The resulting catalyst is identified (abstract; pg. 307, 2nd column; p. 310). Kirchnerova teaches that freezing should be done as quickly as possible to preserve solution homogeneity (p. 308, 2nd column). The catalytic activity is examined in the results section of the paper.

Regarding claim 7, Kirchnerova teaches the addition of lanthanum powder to the solution strontium nitrate (p. 310).

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Regarding claim 9, Kirchnerova teaches a calcination step after freeze drying (col. 2, p. 310).

Regarding claim 10, Kirchnerova teaches that several different perovskite compositions can be prepared. It would have been obvious to ordinary skill in the art at the time of the invention to collect this data in a library because it is already known that this method can be used with several metals (col. 2, p. 310).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2 and 4-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Haas (WO 03/049849) as in claims 1 and 3 above, further in view of Allison (US 6,723,886).

Allison teaches reaction vessels running in parallel surrounded by a cooling medium (figures 7 and 8). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the process of Haas with the vessels of Allison because the parallel reactors are able to produce a greater amount of end product yet still be operated efficiently as they can all be cooled together. Although Allison teaches the production of a different product, use of

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reactor vessels in parallel instead of individually or consecutively is well known in the art and for commercial production of reactants.

Claims 2 and 4-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kirchnerova, Jitka, Synthesis and characterization of perovskite catalysts, Solid State Ionics 12 (1999) 307-317) as in claims 1 and 3 above, further in view of Allison (US 6,723,886).

Allison teaches reaction vessels running in parallel surrounded by a cooling medium (figures 7 and 8). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the process of Haas with the vessels of Allison because the parallel reactors are able to produce a greater amount of end product yet still be operated efficiently as they can all be cooled together. Although Allison teaches the production of a different product, use of reactor vessels in parallel instead of individually or consecutively is well known in the art and for commercial production of reactants.

### ***Response to Arguments***

Applicant's arguments filed 01-15-10 have been fully considered but they are not persuasive. Applicant states that claim 1 has not been anticipated, however, the claims of Haas deal with the addition of several substances and solutions in order to precipitate an inorganic substance. Further, the abstract of Kirchnerova teaches the use of a metal nitrate solution and an aqueous slurry of lanthanum hydroxide to form a perovskite catalyst. Applicant's arguments should be more specific as to how these references may fail to anticipate the current

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claims. Further, the arguments submitted on April 28, 2009 are no longer relevant as Chopin was not used in the last rejection.

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **MELISSA STALDER** whose telephone number is (571)270-5832. The examiner can normally be reached on Monday-Friday, 8:00-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Melvin Curtis Mayes can be reached on 571-272-1234.

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The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MS  
04-07-10

/Melvin Curtis Mayes/  
Supervisory Patent Examiner, Art Unit 1793